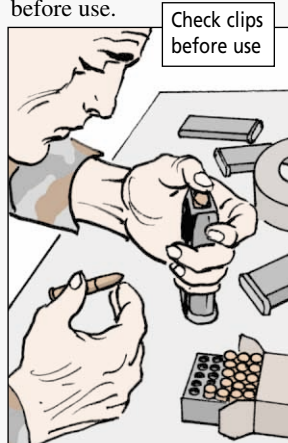


## Small Arms Ammunition

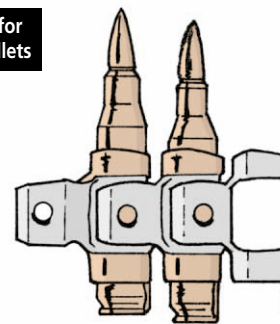


To make sure small arms ammunition will function right, give rounds, clips and magazines a quick inspection before use.



- Reject rounds that have bullets seated too far in or out of their cases. They make an uneven clip or belt that will jam your weapon.

Check rounds for mis-seated bullets

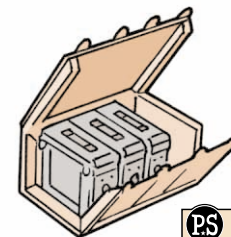


- Turn in rounds that are loose, split or have lopsided points.
- Avoid belted machine gun ammunition with weak, broken or stretched links.
- Don't use rifle clips or magazines with dents, bulges, cracks or weak springs.

Once you've determined your small arms ammunition is safe, keep it that way by storing it in closed metal containers. That keeps the ammo dry and out of the direct rays of the sun in hot weather.

Make sure you save all inner and outer packing material for repackaging unused small arms ammunition for turn-in.

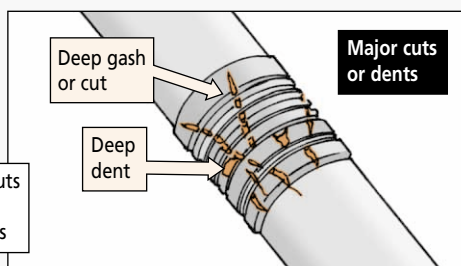
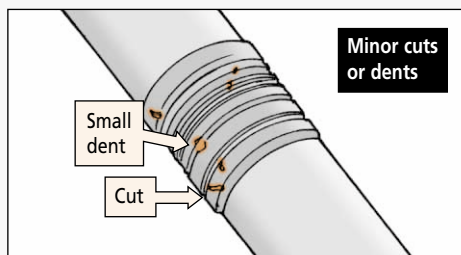
Save packing material for reuse



## Artillery Ammunition

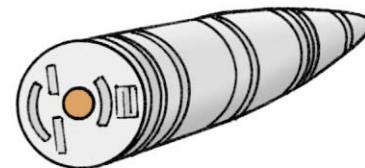


- 155mm projectiles with loose or cracked base plates, loose, missing or damaged grommets, and damaged or corroded rotating bands. A cut or dent that extends through all sections of the rotating band could cause a short round.
- Severely corroded aluminum base plates on Improved Conventional Munitions (ICM), specifically the M483A1 with the green base plate. Corrosion could cause a blown weapon.



- Swollen obturating bands on 155mm rocket-assisted projectiles (RAP) and ICM projectiles. The bands may swell due to moisture and pop out of groove. Reseat the bands if possible. Reject the round if the bands are cracked or missing.
- A stuck lifting or closing plug on 155mm projectiles. The plug must be tight, but it should give to a good, strong turn. If not, turn in the projectile. If the plug threads are rusty, clean them and apply a light coat of silicone grease, NSN 6850-00-702-4297. Then, keep the plug in place until the round's ready for use.
- Liquid or crystalline matter oozing or growing around the threads in the nose or the fuze cavity on high explosive D544 155mm projectiles. The goo could be explosive exudate or a leaking chemical. Isolate the leaky round and call in the Explosives Ordnance Disposal (EOD) experts.
- White smoke or gray crusty powder indicating a leaking white phosphorus (WP) round. Leaking WP rounds should be immediately submerged in water and left there. Notify EOD.
- Primers that are not flush with the cartridge case on 105mm artillery ammunition. If the primer sticks out, you could accidentally bump, strike or compress it and ignite the propellant. If the primer is too far in, it won't fire at all.
- Damage to the base of primer-installed rounds. Use the fiber container cap to safeguard the primer until it's being loaded.
- Supplementary charges, if needed, on C445 105mm and D544 155mm ammo. Never fire a short fuze designed for a shallow fuzewell in a deep-cavity projectile without using a supplementary charge. Turn in projectiles that are missing supplementary charges.
- Rounds damaged by recoil or rammed out of a gun or howitzer. Turn them in.

Protect the percussion primer from bumps, strikes or compression



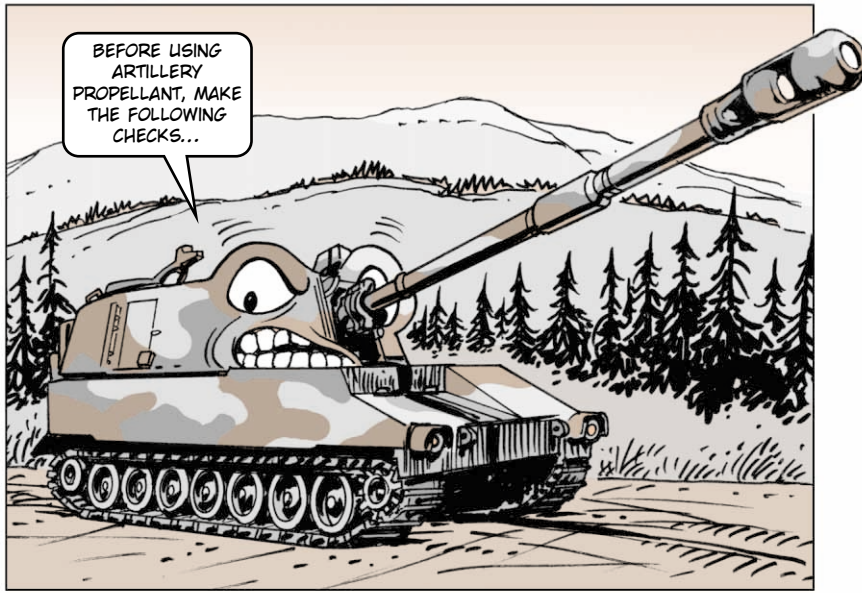
## Pyrotechnics

Any signaling devices that have misleading or missing color markings should not be used. Using the wrong color signaling device could have disastrous consequences.

You may notice bulging of the storage container for the M206 infrared counter-measure flare. This is due to gas pressure buildup inside the container.

The gas is flammable, but the M206 flares are still OK to use. Just open the container slowly and carefully so the gas can vent. Don't use tools that may cause a spark and don't have any open flames nearby.

## Propellant



● Propellant containers should be closed tight to protect against moisture.

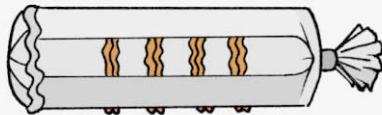
● Propellant bags should be firm, dry, clean, laced and tied. Do not use bags that are torn or leaking propellant.

● Propellant bag stains aren't necessarily bad. Yellow stains are okay. So are blue, brown or orange stains as long as the cloth is strong. Blue, brown or orange stains with cloth that is weak and tears easily should be turned in to your ammunition supply point (ASP).

● Always eyeball the igniter on separate-loading propellant. The igniter end will be padded, marked IGNITER, or packed in red cloth. The igniter must be clean, dry and have loose powder. Lumpy, damp igniter may not work right and may result in erratic flight, hangfire or misfire. Turn it in to your ASP to be checked.

● You can remove propellant increments when ammunition is authorized for zone firing. But **never** add extra increments. If you do remove semi-fixed or separate-loading increments, store them in a safe place. Follow your unit's SOP for proper disposal.

Torn, leaking propellant bags are NO-GO



## Mortar Rounds



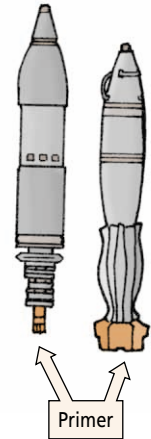
**Warning!** Never let the base primer of any mortar ammunition hit hard on the bottom of the containers. That could ignite the propellant. Protect the primer with the fiber container end cap prior to firing.

Keep mortar rounds packaged as long as practical to keep propellant from exposure.

Always store your WP mortar ammo so the rounds are in a vertical position.

Use a two-man procedure to open and remove rounds packed in "jungle wrap". The first opens and holds the waxy container wrappings open while the second removes the round. That way the one with the sticky hands won't have to touch the round.

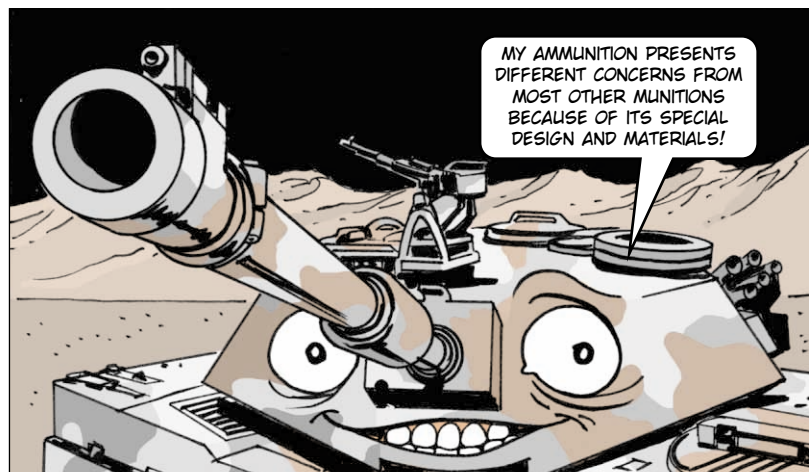
Never let mortar base primers hit hard on container bottoms



### 81mm HE M374A2 (1315-C256) and 81mm M375A1/A2 (1315-C276) WP Smoke Cartridges

Every precaution must be taken to keep C256 and C276 ammunition dry. Firing in wet weather is not a good idea because critical short rounds may occur when propellant charge bags are wet or have previously been exposed to moisture.

## Tank Ammunition



120mm tank rounds have a combustible cartridge case, synthetic obturators, easily damaged nose tips and, on the M829-series, depleted uranium (DU) penetrators.

TAKE THE TIME TO CHECK YOUR 120MM AMMO FOR THE FOLLOWING PROBLEMS...



- A cracked or punctured cartridge case.
- Scratches or abrasions to the cartridge case that remove the protective coating and expose a yellowish white material.
- Loose projectiles (separation from the cartridge case).
- Cracked obturator.
- Cracked sabot.
- Bent, cracked or loose windshield.
- Damage to the cartridge, which might expose the DU core. **Any** possible damage to the DU core should be reported to your NBC NCO for action.

Check out TM 9-1300-251-20&P to determine serviceability of tank ammunition. If you're in doubt or don't have the TM available, turn in suspect rounds to your ASP and draw new ammo.

The M829A1 cartridge is susceptible to forward bourrelet expansion from water freezing between the penetrator and the sabot. When this happens, the round is either difficult to chamber or won't chamber at all.

If you are chambering rounds in freezing temperatures and you have one hanging out of the breach about 8 inches, a frozen bourrelet is the likely problem. Remove the round and place it where the ice can melt. After the ice melts, the round is OK to use.

When loading unpackaged ammunition into a tank, be careful not to dent or scrape the cartridge case, projectile or fuze.

Watch for primers not flush with the cartridge case. If the primer sticks out, it could be dangerous to use. If it's too far in, the primer won't fire.

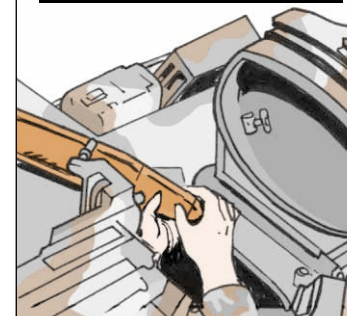
Protect electrically fired cartridges from static electricity caused by low humidity and layers of clothing during the winter months. Ground your stored cartridges with whatever grounding equipment is available.

Turn in all rounds damaged by recoil or rammed out of a gun.

Tarps or other suitable waterproof covering should be placed over the turret bustle on uploaded tanks when parked. Water leakage into the bustle can cause damage to uploaded ammunition, including corroded stub cases and primers. Wet, soggy combustible cases may not chamber properly. That results in low round velocity, poor accuracy and residue problems.

If standing water is present in the bustle, don't store ammo in the bottom row of turret racks.

Do not dent ammo when moving it into or out of combat vehicles



## Grenades

WHEN HANDLING FRAGMENTATION HAND GRENADES AND SMOKE GRENADES, YOU SHOULD...



- Be sure the safety pin is present and installed before you remove a grenade from its container. If you can't see the pin, assume it isn't there and get assistance.
- Never lift or handle a grenade by the safety pin pull ring or safety clip.
- Don't pull the grenade safety pin until you are ready to use the grenade.
- Avoid putting a grenade in a location where the safety pin could be accidentally removed.
- Never put an HC smoke grenade into water. HC reacts violently with water.
- Cold temperatures may cause the thermite grenade (AN-M14, G900) to explode rather than burn when used.

HC grenades and water *don't* mix



## Mines



Mines are composed of various plastics and metals which are susceptible to damage and deterioration. Never use or emplace mines that are cracked or damaged.

The plastic case on M18A1 (Claymore) anti-personnel mines (1345-K143 and K145) that were manufactured before December 1989 may become soft and sticky. This deterioration is caused by a chemical reaction between the explosive and polystyrene component of the plastic.

As long as the explosive isn't exposed, the mine is OK to use. However, you may need to cut the mine from its cloth bandoleer. Limit the cut to the minimum required to extract the mine from the bandoleer.

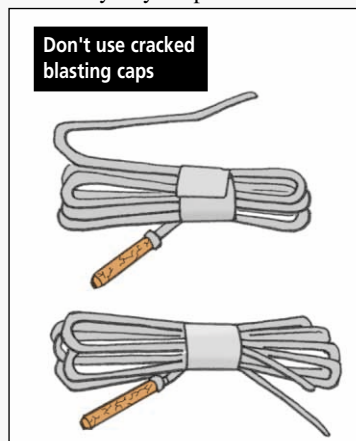
## Demolition Material

Detonators, initiators, squibs, blasting caps and other initiating devices should always be carried in protective containers—never loosely in your pocket.

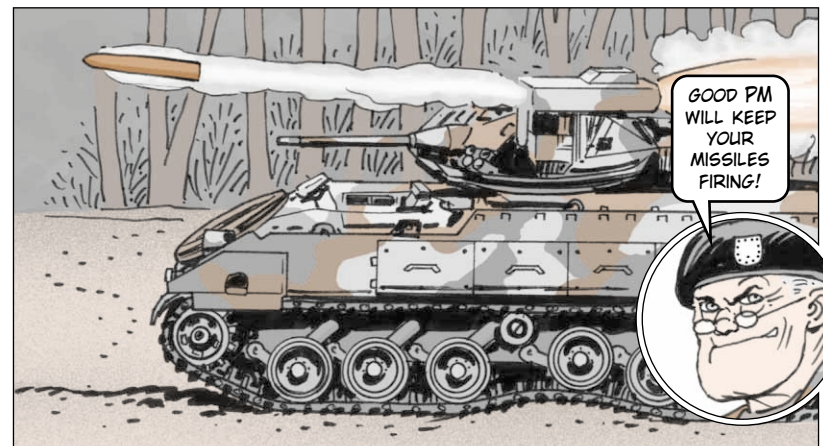
The devices should be securely packed inside the container to prevent rolling and jostling. Mark the container so you'll know what's inside.

Some demolition materials, like sheet explosive and C4 blocks, come with an adhesive backing. The adhesive won't stick to a wet surface or if temperatures are below freezing. You'll need to devise a field-expedient method to affix the demolition explosives when it's wet or freezing.

Don't use blasting caps that have cracks or splits. Be sure electric blasting caps are shunted by twisting the lead wires or have a short circuit tab attached.



## Rockets and Guided Missiles



Rockets with bent or broken fins, dented motors or launcher tubes, or broken electrical connections are NO-GO and should be turned in.

Don't use rockets that have been dropped. The propellant grain may crack if dropped, especially in cold weather. That could result in motor blow during rocket flight.

Solid propellant rocket motors in guided missiles that have been dropped more than eighteen inches should be tagged unserviceable and returned to the ASP. Cracked rocket motors could rupture inside the launcher, causing injury and equipment damage.

Protect electrically initiated rockets and guided missiles from static electricity. Use whatever grounding material is available.

When storing rocket motors, rockets and guided missiles, point them in a direction that will cause the least damage to personnel and equipment if they accidentally fire.

After unpacking guided missiles that contain desiccant bags, immediately return the desiccant to the container for later reuse and close the container.

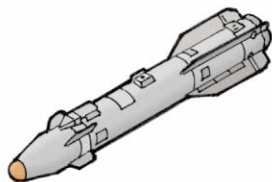
Avoid sealing wet missiles in shipping and storage containers. If possible, place the wet missiles in a sheltered area or cover, allowing them to dry inside their containers before attaching the lids. Don't forget to add desiccant if available.



The HELLFIRE's environmental protection cover (EPC) kit may be installed on the nose of the missile in cold weather to protect the seeker dome prior to launch. There are two configurations of the EPC:

- The MH51, NSN 1377-01-159-3918, can be used on the AGM-114A/B/C/K HELLFIRE missile.
- The MT26, NSN 1377-01-359-2923, has a longer cable for use on the AGM-114F HELLFIRE missile.

Be sure the missile dome is ice-free before you install the EPC. It's a tight fit and may shatter if you try to install it on an icy missile dome.



Check missile dome for ice before installing EPC

## Fuzes

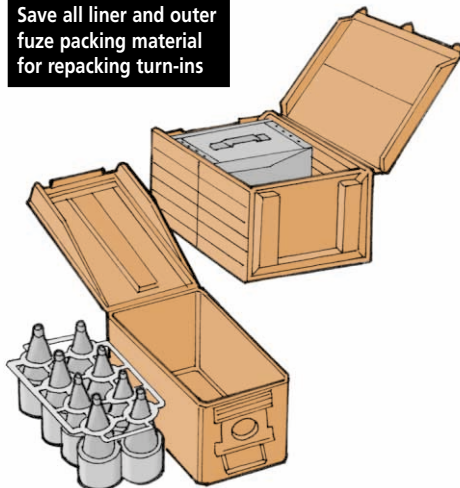


After removing fuzes from their containers, save the inner and outer packing material and desiccant. Put it all back in the original container so that it'll be available for repackaging turn-ins.

The styrofoam inner packing material will absorb moisture from humid air. That can make it difficult to remove the fuzes, so keep the container closed as much as possible.

Before firing fuzed ammunition, make sure the fuze is fully seated. The fuze shoulder must be seated smack on the projectile's nose with no threads or space showing.

Save all liner and outer fuze packing material for repacking turn-ins



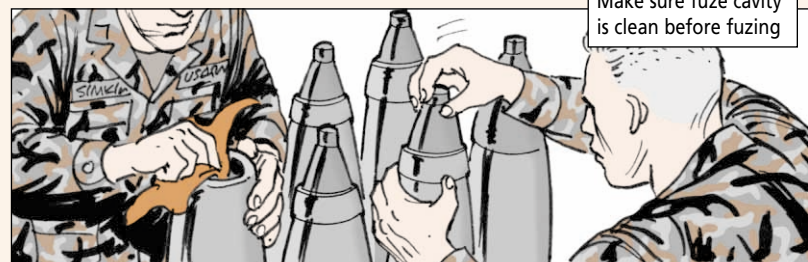
Make sure the safety pins, pull wires or any other safety device on fuzes are in place and in good shape. Never remove the safety device until you're ready to fire.

If the safety device is missing, broken, corroded or dented, turn in the fuze or report it.

Know which fuze tools are authorized for which fuzes. Then use the tools gently when you screw on a fuze. Never force, spin, roll or drop a fuze. When a round is issued to you already fuzed, leave it fuzed unless your ammunition pubs give you a different fuze for the round.

Unauthorized or altered fuzes are also off-limits. Ammunition with no fuze or the wrong fuze can blow up in the bore or become a dud downrange.

Before fuzing, make sure the fuze cavity is clean. Use a lint-free, clean cloth and wooden (not metal) stick to clean the cavity. For the fuze to seat right, the fuze and projectile threads must be clean. Never use a fuze or projectile with damaged threads. Turn it in.



Keep fuzed ammunition out of the path of your weapon's recoil or anything else that might bang it. If a round is hit, isolate it with a tag explaining what hit the round, then report it immediately. Do the same for any damaged rounds, fuzed or not.

Prepared fuzes that haven't been fired need special handling. Clean them well before repacking in the original packing.

For separate-loading ammunition, remove the fuze, pack it carefully and replace the projectile's plug and gasket. Write on the box the date the ammunition was repacked. Use that ammunition first next time you fire to cut down on opened boxes.

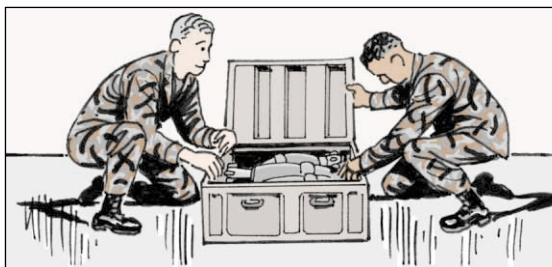
Removed fuzes should be reset to their initial setting before being repacked.

M732 proximity fuzes (DODIC N464) must be stored nose down (arrow on box pointing up) to prevent the battery electrolyte from leaking.

Reset removed fuzes to their initial setting before repacking



## More Help



"WHEN IN DOUBT ABOUT THE PROPER CARE AND CONDITION OF AMMUNITION, THE BEST SOURCE FOR ADVICE IS A QUALITY ASSURANCE SPECIALIST (AMMUNITION SURVEILLANCE), OR "QASAS"."



A QASAS MAY BE CONTACTED THROUGH YOUR ASP, RANGE SAFETY, OR EOD PERSONNEL.

YOU CAN ALSO CHECK WITH PERSONNEL FROM YOUR AMMUNITION SUPPLY ORGANIZATION OR LOGISTICS STAFF ELEMENT.



"OTHER SOURCES OF INFORMATION INCLUDE YOUR WEAPON SYSTEMS -10 MANUALS, A MILITARY AMMUNITION SPECIALIST (MOS 55B), OR AN AMMUNITION LAR."

AN ON-LINE 24-HOUR AMMUNITION HELP SYSTEM (AMMOHELP) ALLOWS ANYONE WITH AN OFFICIAL NEED TO SUBMIT QUESTIONS REGARDING MUNITIONS, EXPLOSIVES, LOGISTICS, QUALITY, SAFETY, SECURITY, TRAINING, EQUIPMENT, OR TECHNOLOGY.

THE U.S. ARMY DEFENSE AMMUNITION CENTER (DAC) ALSO MAINTAINS USEFUL AMMUNITION SUPPORT INFORMATION ON ITS WEB SITE.



**DAC Home Page:**  
<http://www.dac.army.mil/>  
**AmmoHelp web site:**  
<http://www.dac.army.mil/ammohelp/>  
**AmmoHelp e-mail:**  
[ammohelp@dac.army.mil](mailto:ammohelp@dac.army.mil)  
**AmmoHelp toll-free hotline:**  
**1-877-668-2840**